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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/596,685	08/07/2006	Fabian Fagotti	04306/0204990-US0	9466

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EXAMINER	
BERTHEAUD, PETER JOHN	
ART UNIT	PAPER NUMBER
3746	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/596,685	FAGOTTI, FABIAN	
	Examiner	Art Unit	
	PETER J. BERTHEAUD	3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 November 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 June 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This Office action is in response to the request for reconsideration filed 11/24/2009. It should be noted that none of the claims have been amended or cancelled.

Specification

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. The abstract of the disclosure is objected to because it contains legal phraseology. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Riffe 5,173,034 in view of Fogotti WO 99/53200.

Riffe teaches a discharge system for compressors comprising: a cylinder block 19 defining a compression chamber (see 29); a first discharge chamber 41 receiving an intermittent gas mass flow from the compression chamber; a second discharge chamber 46 in direct communication with the first discharge chamber 41 (see Fig. 2B); a third discharge chamber 48 in fluid communication with the first discharge chamber 41 and the second discharge chamber 46 and opened to a discharge tube 56; and a valve (see hole in 33 leading from 41 to 59) provided in the fluid communication between the first and third discharge chambers wherein the valve allows gas to pass, establishing a parallel arrangement of the discharge chambers and providing a direct fluid communication between the first 41 and the third discharge chambers 48, when a gas mass flow passing from the compression chamber to the first discharge chamber reaches a determined gas mass flow value. Riffe further teaches (Fig. 2A) that the valve may not exist thus blocking said direct fluid communication between the first 63 and third 68 discharge chambers, establishing a serial arrangement of the discharge chambers (63, 66, 68), when said gas mass flow reaches values that are lower than the determined gas mass flow value. Riffe further teaches a valve plate 33 is provided between the compression chamber and the first discharge chamber 41, carrying at least one suction valve and one discharge valve 42 (see col. 4, lines 15-18). However, Riffe does not teach the claimed valve limitations taught by Fogotti.

Fogotti (Figs. 2 and 3) teaches a discharge arrangement for a hermetic compressor comprising: a cylinder block 2 defining a compression chamber 7; a first discharge chamber 12 receiving an intermittent gas mass flow from the compression chamber 7; a second discharge chamber 13 in direct communication with the first discharge chamber 12; a third discharge chamber 15 in fluid communication with the first discharge chamber 12 and the second discharge chamber 13 and opened to a discharge tube 9; and a valve 30 provided in the fluid communication between the first 12 and third 15 discharge chambers and which assumes an open position, communicating the first and the third discharge chambers when a gas mass flow passing from the compression chamber 7 to the first discharge chamber 12 reaches a determined gas mass flow value, and a closed position blocking, at least in most part, said fluid communication between the first 12 and third 15 discharge chamber when said gas mass flow reaches values that are lower than the determined gas mass flow value; wherein the valve means 30 is disposed in a third discharge orifice 20 provided between the first discharge chamber 12 and the third discharge chamber 15; wherein, valve 30 is in the form of a vane mounted to the valve plate 4 (see valve vanes in Figs. 2 and 3).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to have modified the muffler assembly of Riffe by implementing a valve between the first and third discharge chambers that may open and close depending on the gas mass flow value, as taught by Fogotti, in order to allow for high compressor efficiency while minimizing noise.

6. Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Riffe 5,173,034 in view of Fogotti WO 99/53200 in view of Seo U.S. 2002/0136646 A1.

Riffe in view of Fogotti discloses the invention as discussed above. However, Riffe in view of Fogotti does not teach the following valve blade limitations taught by Seo.

Seo discloses a discharge arrangement for a hermetic compressor comprising: a cylinder block 130 defining a compression chamber 131; a first discharge chamber (62) (see paragraph 7 and Fig. 1) receiving an intermittent gas mass flow from the compression chamber 131. Seo further discloses a valve plate 72 between the compression chamber 131 and the first discharge chamber (62) carrying at least one suction valve 71a incorporated into a valve blade 71 affixed to a valve plate 72.

Therefore, it would have been obvious to one or ordinary skill in the art at the time of invention to have modified the valve assembly of Riffe in view of Fogotti by implementing the valves into valve blades and securing them to the valve plate, as taught by Seo, in order to increase the life span of the valve assembly. Furthermore, it is well known in the art to incorporate valves into valve blades.

Response to Arguments

7. Applicant's arguments filed 11/24/2009 have been fully considered but they are not persuasive.

8. In response to Applicant's arguments with respect to claims 1-3: Applicant first argues that the hole in valve plate 33 of Riffe is not a "valve". Examiner respectfully

disagrees. A valve may be any device for halting or controlling the flow of a liquid, gas, or other material through a passage. The Examiner realizes that there is no opening and closing valve between the first and third discharge chambers in Riffe; however, it is reasonable to interpret that the hole itself in valve plate 33, leading to passage 59, is a "valve". Whether or not the hole in valve plate 33 is being properly interpreted as a valve is ultimately moot due to Fogotti's teaching of an opening and closing valve (to be explained below). As for Applicant's point that the discharge chamber arrangement shown in Figure 2A of Riffe is a permanent serial arrangement: this figure is only referred to in order to show that a serial arrangement of three discharge chambers in a muffler is well known in the art. Therefore, Riffe discloses that both a parallel and serial arrangement of three discharge chambers in a muffler is well known in the art (See Figures 2A and 2B).

Applicant goes on to argue that Fogotti does not change his assembly between a serial and parallel arrangement of discharge chambers. The Examiner agrees with this statement and points out that this is not what Fogotti is supposed to teach. The objective of the Examiner's use of the Fogotti reference is to teach that it would be obvious to valve the muffler arrangement of Riffe between the first and third chambers with a check valve.

Applicant finally argues that claims 1-3 are not obvious over Riffe in view of Fogotti. Examiner respectfully disagrees. Fogotti teaches a discharge chamber arrangement comprising multiple chambers (12, 13, 15) and a check valve 30. In Fogotti the valve 30 is provided in the fluid communication between the chambers, the valve

opening when a gas mass flow in chamber 12 reaches a determined gas mass flow value, and the valve closing when said gas mass flow reaches values that are lower than the determined gas mass flow value. Examiner realizes that the discharge chambers in Fogotti are always in a serial arrangement, with the valve 30 being located specifically between chambers 12 and 13 (also between 12 and 15 as broadly interpreted). However,/Devon C Kramer/

Supervisory Patent Examiner, Art Unit 3746 Fogotti also teaches that chamber 12 communicates with chamber 13 via two separate holes, 20 and 14, one valved and one not. Therefore, Fogotti teaches a first discharge chamber communicating with downstream discharge chambers via one valved and one non-valved hole, just like the present invention. This means that Fogotti teaches either a serial or parallel arrangement of fluid communication between his discharge chambers depending on a determined gas mass flow value. As stated in Fogotti, this is for the purpose of maintaining the attenuation of noises in the discharge chambers and the energy loss through fluid communication means within predetermined values (see page 4, lines 1-11). Therefore, it would have been obvious to have modified the discharge chamber arrangement and positioning shown in Riffe by implementing the structure of the one-valved and one non-valved hole between the discharge chambers (the valved hole being between the first and third chambers), as shown in Fogotti, in order to allow for high compressor efficiency while minimizing noise. Through this combination all of the structural limitations have been taught.

Thus, Examiner maintains the rejection of claims 1-3 under 35 U.S.C. 103(a) as being unpatentable over Riffe 5,173,034 in view of Fogotti WO 99/53200.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to PETER J. BERTHEAUD whose telephone number is (571)272-3476. The examiner can normally be reached on M-F 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Devon Kramer can be reached on (571) 272-7118. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Devon Kramer/
Supervisory Patent Examiner, Art Unit

PJB
/Peter J Bertheaud/
Examiner, Art Unit 3746